

#4

SEQUENCE LISTING

<110> PROCYON BIOPHARMA INC.

<120> PHARMACEUTICAL PREPARATIONS AND METHODS FOR INHIBITING TUMORS

<130> 06508-030-US-03

<140> US 09/977,406

<141> 2001-10-15

<150> CA 2,321,256

<151> 2000-10-16

<150> CA 2,355,334

<151> 2001-08-20

<160> 92

<170> PatentIn version 3.1

<210> 1

<211> 94

<212> PRT

<213> Homo sapiens

<300>

<301> Ulvsback, M., Lindstrom, C., Weiber, H., Abrahamson, P.A., Lilja, H. and Lundwall, A"

<302> Molecular cloning of a small prostate protein, known as beta-microseminoprotein, PSP94 or beta-inhibin, and demonstration of transcripts in non-genital tissues.

<303> Biochem. Biophys. Res Commun.

<304> 164

<305> 3

<306> 1310-1315

<307> 1989

<308> GI 131436

<309> 1988-08-01

<400> 1

Ser Cys Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg  
1 5 10 15

Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp  
20 25 30

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Ile Ser  
35 40 45

Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp Asn Cys  
50 55 60

Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val Glu Lys  
65 70 75 80



Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu Trp Ile Ile  
85 90

<210> 2  
<211> 102  
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<220>  
<223> recombinant human PSP94 (rHuPSP94) produced from yeast

<400> 2

Glu Ala Glu Ala Tyr Val Glu Phe Ser Cys Tyr Phe Ile Pro Asn Glu  
1 5 10 15

Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn  
20 25 30

Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys  
35 40 45

Thr Cys Tyr Glu Thr Glu Ile Ser Cys Cys Thr Leu Val Ser Thr Pro  
50 55 60

Val Gly Tyr Asp Lys Asp Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp  
65 70 75 80

Cys Lys Tyr Ile Val Val Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser  
85 90 95

Val Ser Glu Trp Ile Ile  
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<210> 3  
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<220>  
<223> decapeptide

<400> 3

Tyr Thr Cys Ser Val Ser Glu Pro Gly Ile  
1 5 10

<210> 4  
<211> 15  
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<220>  
<223> Polypeptide 7-21

<400> 4

Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu  
1 5 10 15

<210> 5  
<211> 15  
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<220>  
<223> PCK3145 (polypeptide 31-45)

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
1 5 10 15

<210> 6  
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<212> PRT  
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<220>  
<223> Polypeptide 76-94

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Ile Val Val Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu  
1 5 10 15

Trp Ile Ile

<210> 7  
<211> 26  
<212> DNA  
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<220>  
<223> Oligonucleotide used in the amplification and cloning of rHPSP94

<400> 7  
gggaagaatt ctcatgctat ttcata

26

<210> 8  
<211> 21  
<212> DNA  
<213> Artificial Sequence

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<223> Oligonucleotide used in the amplification and cloning of rHPSP94

<400> 8  
tggatatctg cagaattcgg c

21

<210> 9  
<211> 285  
<212> DNA  
<213> Homo sapiens

<300>  
<301> Green, C.B., Liu, W.Y. and Kwok, S.C.  
<302> Cloning and nucleotide sequence analysis of the human beta-microseminoprotein gene.  
<303> Biochem. Biophys. Res. Commun.  
<304> 167  
<305> 3  
<306> 1184-1190  
<307> 1990  
<308> GI 514370  
<309> 1995-01-07

<400> 9  
tcatgctatt tcatacctaa tgagggagtt ccaggagatt caaccaggaa atgcatggat 60  
ctcaaaggaa acaaacaccc aataaactcg gaggggcaga ctgacaactg tgagacatgc 120  
acttgctacg aaacagaaat ttcattgtgc acccttgttt ctacacctgt gggttatgac 180  
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<210> 10  
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<212> PRT  
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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
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<210> 11  
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<213> Artificial Sequence

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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

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Ile

<210> 12  
<211> 18  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 12

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser

<210> 13  
<211> 19  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 13

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys

<210> 14  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 14

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys  
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<210> 15  
<211> 21

<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 15

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr  
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<210> 16  
<211> 22  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 16

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu  
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<210> 17  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 17

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val  
20

<210> 18  
<211> 24  
<212> PRT  
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<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 18

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser  
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<210> 19

<211> 25

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 19

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr  
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<210> 20

<211> 26

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 20

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro  
20 25

<210> 21

<211> 27

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 21

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val  
20 25

<210> 22  
 <211> 28  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 22

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly  
 20 25

<210> 23  
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<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 23

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr  
 20 25

<210> 24  
 <211> 30  
 <212> PRT  
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<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 24

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp  
 20 25 30

<210> 25  
 <211> 31  
 <212> PRT  
 <213> Artificial Sequence



<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 25

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys  
20 25 30

<210> 26  
<211> 32  
<212> PRT  
<213> Artificial Sequence

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<400> 26

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

<210> 27  
<211> 33  
<212> PRT  
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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn

<210> 28  
<211> 34  
<212> PRT  
<213> Artificial Sequence

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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 28

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys

<210> 29

<211> 35

<212> PRT

<213> Artificial Sequence

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<400> 29

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln  
35

<210> 30

<211> 36

<212> PRT

<213> Artificial Sequence

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<400> 30

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg  
35

<210> 31

<211> 37

<212> PRT

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<400> 31

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile  
35

<210> 32

<211> 38

<212> PRT

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<400> 32

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe  
35

<210> 33

<211> 39

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<400> 33

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys  
35

<210> 34  
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<220>  
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 <400> 34

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
 20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys  
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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
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Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
 20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu  
 35 40

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<220>  
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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp

20

25

30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp  
35 40

<210> 37  
<211> 43  
<212> PRT  
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<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 37

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys  
35 40

<210> 38  
<211> 44  
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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 38

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys  
35 40

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<211> 45  
<212> PRT  
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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
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Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
 20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr  
 35 40 45

<210> 40

<211> 46

<212> PRT

<213> Artificial Sequence

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 1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
 20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile  
 35 40 45

<210> 41

<211> 47

<212> PRT

<213> Artificial Sequence

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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 41

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
 20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val  
 35 40 45

<210> 42

<211> 48

<212> PRT

<213> Artificial Sequence

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<400> 42

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

<210> 43

<211> 49

<212> PRT

<213> Artificial Sequence

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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu

<210> 44

<211> 50

<212> PRT

<213> Artificial Sequence

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<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 44

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys  
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<210> 45  
<211> 51  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 45

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys  
50

<210> 46  
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<212> PRT  
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<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 46

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys Asp  
50

<210> 47



<211> 53  
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<220>  
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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys Asp Pro  
50

<210> 48  
<211> 54  
<212> PRT  
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<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 48

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys Asp Pro Lys  
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<210> 49  
<211> 55  
<212> PRT  
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<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 49

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys Asp Pro Lys Lys  
50 55

<210> 50

<211> 56

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<213> Artificial Sequence

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Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr  
50 55

<210> 51

<211> 57

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 51

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val

35

40

45

Glu Lys Lys Asp Pro Lys Lys Thr Cys  
50 55

&lt;210&gt; 52

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

&lt;400&gt; 52

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser  
50 55

&lt;210&gt; 53

&lt;211&gt; 59

&lt;212&gt; PRT

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

&lt;400&gt; 53

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
1 5 10 15

Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
20 25 30

Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
35 40 45

Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val  
50 55

&lt;210&gt; 54

&lt;211&gt; 60

<212> PRT  
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 <220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
  
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 Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15  
  
 Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
 20 25 30  
  
 Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
 35 40 45  
  
 Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser  
 50 55 60  
  
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 <212> PRT  
 <213> Artificial Sequence  
  
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 <400> 55  
  
 Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15  
  
 Ile Ser Cys Cys Thr Leu Val Ser Thr Pro Val Gly Tyr Asp Lys Asp  
 20 25 30  
  
 Asn Cys Gln Arg Ile Phe Lys Lys Glu Asp Cys Lys Tyr Ile Val Val  
 35 40 45  
  
 Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu  
 50 55 60  
  
 <210> 56  
 <211> 62  
 <212> PRT  
 <213> Artificial Sequence  
  
 <220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
  
 <400> 56  
  
 Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu



Glu Lys Lys Asp Pro Lys Lys Thr Cys Ser Val Ser Glu Trp Ile Ile  
 50 55 60

<210> 59  
 <211> 16  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 59

Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
 1 5 10 15

<210> 60  
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<220>  
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<400> 60

Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu  
 1 5 10 15

Thr

<210> 61  
 <211> 18  
 <212> PRT  
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<220>  
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<400> 61

Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr  
 1 5 10 15

Glu Thr

<210> 62  
 <211> 19  
 <212> PRT  
 <213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 62

Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys  
1 5 10 15

Tyr Glu Thr

<210> 63  
<211> 20  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 63

His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr  
1 5 10 15

Cys Tyr Glu Thr  
20

<210> 64  
<211> 21  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 64

Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys  
1 5 10 15

Thr Cys Tyr Glu Thr  
20

<210> 65  
<211> 22  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 65

Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr  
1 5 10 15

Cys Thr Cys Tyr Glu Thr  
20

<210> 66  
<211> 23  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 66

Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu  
1 5 10 15

Thr Cys Thr Cys Tyr Glu Thr  
20

<210> 67  
<211> 24  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 67

Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys  
1 5 10 15

Glu Thr Cys Thr Cys Tyr Glu Thr  
20

<210> 68  
<211> 25  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 68

Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn  
1 5 10 15

Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
20 25

<210> 69



<211> 26  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 69

Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp  
1 5 10 15

Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
20 25

<210> 70  
<211> 27  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 70

Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr  
1 5 10 15

Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
20 25

<210> 71  
<211> 28  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 71

Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln  
1 5 10 15

Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
20 25

<210> 72  
<211> 29  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 72

Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp  
1 5 10 15

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
20 25

<210> 73

<211> 30

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 73

Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu  
1 5 10 15

Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
20 25 30

<210> 74

<211> 31

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 74

Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser  
1 5 10 15

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
20 25 30

<210> 75

<211> 32

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 75

Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn  
1 5 10 15

Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr

20

25

30

<210> 76  
 <211> 33  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
 <400> 76

Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile  
 1 5 10 15

Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu  
 20 25 30

Thr

<210> 77  
 <211> 34  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
 <400> 77

Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro  
 1 5 10 15

Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr  
 20 25 30

Glu Thr

<210> 78  
 <211> 35  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
 <400> 78

Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys His  
 1 5 10 15

Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys  
20 25 30

Tyr Glu Thr  
35

<210> 79  
<211> 36  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 79

Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn Lys  
1 5 10 15

His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr  
20 25 30

Cys Tyr Glu Thr  
35

<210> 80  
<211> 37  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 80

Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly Asn  
1 5 10 15

Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys  
20 25 30

Thr Cys Tyr Glu Thr  
35

<210> 81  
<211> 38  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 81

Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys Gly  
1 5 10 15

Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu Thr  
20 25 30

Cys Thr Cys Tyr Glu Thr  
35

<210> 82  
<211> 39  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
<400> 82

Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu Lys  
1 5 10 15

Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys Glu  
20 25 30

Thr Cys Thr Cys Tyr Glu Thr  
35

<210> 83  
<211> 40  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
<400> 83

Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp Leu  
1 5 10 15

Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn Cys  
20 25 30

Glu Thr Cys Thr Cys Tyr Glu Thr  
35 40

<210> 84  
<211> 41  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 84

Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met Asp  
1 5 10 15

Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp Asn  
20 25 30

Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
35 40

<210> 85  
<211> 42  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 85

Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys Met  
1 5 10 15

Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr Asp  
20 25 30

Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
35 40

<210> 86  
<211> 43  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)

<400> 86

Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys Cys  
1 5 10 15

Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln Thr  
20 25 30

Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
35 40

<210> 87  
 <211> 44  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
 <400> 87

Cys Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg Lys  
 1 5 10 15

Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp Gln  
 20 25 30

Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
 35 40

<210> 88  
 <211> 45  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from rHuPSP94 sequence (polypeptide analog)  
 <400> 88

Ser Cys Tyr Phe Ile Pro Asn Glu Gly Val Pro Gly Asp Ser Thr Arg  
 1 5 10 15

Lys Cys Met Asp Leu Lys Gly Asn Lys His Pro Ile Asn Ser Glu Trp  
 20 25 30

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
 35 40 45

<210> 89  
 <211> 15  
 <212> PRT  
 <213> Artificial Sequence

<220>  
 <223> Polypeptide derived from PCK3145 sequence (polypeptide analog)

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(1)  
 <223> Xaa may be glutamic acid, asparagine or aspartic acid.

<220>  
 <221> MISC\_FEATURE

<222> (4)..(4)  
<223> Xaa may be threonine or serine.

<220>  
<221> MISC\_FEATURE  
<222> (6)..(6)  
<223> Xaa may be glutamic acid, asparagine, or aspartic acid.

<220>  
<221> MISC\_FEATURE  
<222> (8)..(8)  
<223> Xaa may be glutamic acid, asparagine, or aspartic acid.

<220>  
<221> MISC\_FEATURE  
<222> (9)..(9)  
<223> Xaa may be threonine or serine.

<220>  
<221> MISC\_FEATURE  
<222> (11)..(11)  
<223> Xaa may be threonine or serine.

<220>  
<221> MISC\_FEATURE  
<222> (13)..(13)  
<223> Xaa may be tyrosine or phenylalanine.

<220>  
<221> MISC\_FEATURE  
<222> (14)..(14)  
<223> Xaa may be glutamic acid, asparagine, or aspartic acid.

<220>  
<221> MISC\_FEATURE  
<222> (15)..(15)  
<223> Xaa may be threonine or serine.

<400> 89

Xaa	Trp	Gln	Xaa	Asp	Xaa	Cys	Xaa	Xaa	Cys	Xaa	Cys	Xaa	Xaa	Xaa
1				5					10					15

<210> 90  
<211> 30  
<212> PRT  
<213> Artificial Sequence

<220>  
<223> Polypeptide derived from PCK3145 sequence (polypeptide analog)

<400> 90



Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
 20 25 30

<210> 91

<211> 45

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from PCK3145 sequence (polypeptide analog)

<400> 91

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Trp  
 20 25 30

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
 35 40 45

<210> 92

<211> 60

<212> PRT

<213> Artificial Sequence

<220>

<223> Polypeptide derived from PCK3145 sequence (polypeptide analog)

<400> 92

Glu Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu  
 1 5 10 15

Trp Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Trp  
 20 25 30

Gln Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr Glu Trp Gln  
 35 40 45

Thr Asp Asn Cys Glu Thr Cys Thr Cys Tyr Glu Thr  
 50 55 60